

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1. (Currently amended): A method of collecting an electronic signature for an
2 electronic record stored in a database, the method comprising:
3 receiving, at a processor of a computer system, information provided by a user via
4 a graphical user interface configured to enable users of the computer system to define operations
5 by one or more database applications as triggering conditions for predetermined events
6 monitored by the computer system and processing that occurs when the predetermined events are
7 triggered, the information defining a predetermined event that, upon occurrence, causes the
8 computer system to intercept a database transaction instantiated by one of the database
9 applications with a database management system of a database and generate from data identified
10 in the database transaction an electronic record that requires an electronic signature;
11 receiving, at the processor of the computer system, information provided by the
12 user via the graphical interface that maps data from underlying database tables associated with
13 execution of one or more operations to be performed by a database application in response to the
14 occurrence of the predetermined event to an electronic record;
15 receiving, at a processor of a computer system, information indicative of an
16 occurrence of a predetermined event, the predetermined event defined to represent a set of
17 operations to be performed by a database application to accomplish a task;
18 automatically creating, using the processor of the computer system, an electronic
19 record from data stored in a plurality of different database tables associated with execution of
20 one or more operations in the set of operations based on a mapping in response to the occurrence
21 of the predetermined event;

22 storing, using the processor of the computer system, an instance of the electronic
23 record in a common repository of electronic records that provides an audit trail that cannot be
24 altered or disabled by users associated with the database;

25 executing, using the processor of the computer system, a rule associated with the
26 electronic record to determine whether an electronic signature is required to connote review
27 and/or approval of the electronic record; and

28 if execution of the rule results in a determination that an electronic signature is
29 required, marking, using the processor of the computer system, the instance of the electronic
30 record as unsigned and initiating a request to collect the required electronic signature.

1 2. (Original): The method of claim 1 further comprising receiving an electronic
2 signature from the user; verifying the electronic signature; and in response to a positive
3 verification of the electronic signature, marking the electronic record as signed.

1 3. (Original): The method of claim 2 wherein the electronic record is stored in a
2 common repository of electronic records that provides an audit trail that cannot be altered or
3 disabled by users of the database.

1 4. (Original): The method of claim 1 wherein the electronic record comprises
2 unstructured data in a character large object (CLOB) format.

1 5. (Original): The method of claim 3 wherein the unstructured data comprises a
2 well formed XML document stored within a column of a table stored in the database.

1 6. (Original): The method of claim 4 wherein fields of the electronic record are
2 filled with XML data based on a predefined mapping to multiple data sources.

1 7. (Original): The method of claim 1 further comprising the step of, if execution
2 of the rule results in a determination that an electronic signature is required, displaying data from
3 the electronic record on a computer display.

1 8. (Original): The method of claim 7 wherein data from the electronic record is
2 display according to a predefined layout set forth in an XSL style sheet.

1 9. (Original): The method of claim 1 wherein the rule requires a plurality of
2 different electronic signatures and wherein, if execution of the rule results in a determination that
3 a plurality of electronic signatures are required, requesting the plurality of electronic signatures.

1 10. (Original): The method of claim 1 wherein the electronic record is initially
2 marked as unsigned by setting an appropriate attribute associated with a database table in which
3 at least part of the record is stored.

1 11. (Currently amended): A computer system that manages electronic records
2 stored in a database, the computer system comprising:

3 a processor;

4 a database; and

5 a computer-readable memory coupled to the processor, the computer readable
6 memory configured to store a computer program;

7 wherein the processor is operative with the computer program to:

8 receive information defining operations by one or more database
9 applications as triggering conditions for predetermined events and processing that occurs when
10 the predetermined events are triggered, the information defining a predetermined event that,
11 upon occurrence, causes the processor to intercept a database transaction instantiated by one of
12 the database applications with a database management system of a database and generate from
13 data identified in the database transaction an electronic record that requires an electronic
14 signature;

15 receive information that maps data from underlying database tables
16 associated with execution of one or more operations to be performed by a database application in
17 response to the occurrence of the predetermined event to an electronic record;

18 receive information indicative of an occurrence of a predetermined event,
19 the predetermined event defined to represent a set of operations to be performed by a database
20 application to accomplish a task
21 automatically create an electronic record from data stored in a plurality of
22 different database tables associated with execution of one or more operations in the set of
23 operations based on a mapping in response to the occurrence of the predetermined event;
24 store an instance of the electronic record in a common repository of
25 electronic records that provides an audit trail that cannot be altered or disabled by users
26 associated with the database;
27 execute a rule associated with the electronic record to determine whether
28 an electronic signature is required to connote review and/or approval of the electronic record;
29 and
30 mark the instance of the electronic record as unsigned and initiate a
31 request to collect the required electronic signature if execution of the rule results in a
32 determination that an electronic signature is required.

1 12. (Original): The computer system of claim 11 wherein the electronic record is
2 stored in a common repository of electronic records that provides an audit trail that cannot be
3 altered or disabled by users of the system.

1 13. (Original): The computer system of claim 12 wherein the electronic record
2 comprises unstructured data in a character large object (CLOB) format.

1 14. (Original): The computer system of claim 13 wherein the unstructured data
2 comprises a well formed XML document stored within a column of a table stored in the
3 database.

1 15. (Original): The computer system of claim 14 wherein fields of the electronic
2 record are filled with XML data based on a predefined mapping to multiple data sources.

1 16. (Original): The computer system of claim 11 wherein the processor and
2 computer program are further operative to obtain and verify the electronic signature, and
3 thereafter, mark the electronic record as signed.

1 17. (Previously presented): The computer system of claim 16 wherein the
2 processor and computer program are further operative to initially mark the electronic record as
3 unsigned by setting an appropriate attribute associated with a database table in which at least part
4 of the record is stored.

1 18. (Currently amended): A computer program product having a computer-
2 readable storage medium storing a set of code modules which when executed by a processor of a
3 computer system cause the processor to manage electronic records stored in a database, the
4 computer program product comprising:

5 code for receiving information provided by a user via a graphical user interface
6 configured to enable users to define operations by one or more database applications as
7 triggering conditions for predetermined events and processing that occurs when the
8 predetermined events are triggered, the information defining a predetermined event that, upon
9 occurrence, causes a computer system to intercept a database transaction instantiated by one of
10 the database applications with a database management system of a database and generate from
11 data identified in the database transaction an electronic record that requires an electronic
12 signature;

13 code for receiving information provided by the user via the graphical from a user
14 interface that maps data from underlying database tables associated with execution of one or
15 more operations to be performed by a database application in response to the occurrence of the
16 predetermined event to an electronic record;

17 code for receiving information indicative of an occurrence of a predetermined
18 event, the predetermined event defined to represent a set of operations to be performed by a
19 database application to accomplish a task;

20 code for automatically creating an electronic record from data stored in a plurality
21 of different database tables associated with execution of one or more operations in the set of
22 operations based on a mapping in response to the occurrence of the predetermined event;
23 code for storing an instance of the electronic record in a common repository of
24 electronic records that provides an audit trail that cannot be altered or disabled by users
25 associated with the database;
26 code for executing a rule associated with the electronic record to determine
27 whether an electronic signature is required to connote review and/or approval of the electronic
28 record; and
29 code for marking the instance of the electronic record as unsigned and initiating a
30 request to collect the required electronic signature if execution of the rule results in a
31 determination that an electronic signature is required.

1 19. (Previously presented): The computer program product of claim 18 wherein
2 the electronic record is stored in a common repository of electronic records that provides an audit
3 trail that cannot be altered or disabled by users of the system.

1 20. (Previously presented): The computer program product of claim 19 wherein
2 the electronic record comprises unstructured data in a character large object (CLOB) format.

1 21. (Previously presented): The computer program product of claim 20 wherein
2 the unstructured data comprises a well-formed XML document stored within a column of a table
3 stored in the database.

1 22. (Previously presented): The computer program product of claim 21 wherein
2 fields of the electronic record are filled with XML data based on a predefined mapping to
3 multiple data sources.

1 23. (Previously presented): The computer program product of claim 18 further
2 comprising code for obtaining and verifying the electronic signature, and thereafter, marking the
3 electronic record as signed.

1 24. (Previously presented): The computer program product of program 23
2 further comprising code for initially marking the electronic record as unsigned by setting an
3 appropriate attribute associated with a database table in which at least part of the record is stored.

1 25. (Currently amended): A computer-implemented method of collecting an
2 electronic signature for an electronic record stored in a database, the method comprising:
3 receiving, at a processor of a computer system, information provided by a user via
4 a graphical user interface configured to enable users to define operations by one or more
5 database applications as triggering conditions for events associated with industrial processes
6 monitored by the computer system and processing that occurs when the events are triggered, the
7 information defining an event associated with an industrial process that, upon occurrence, causes
8 the computer system to intercept a database transaction instantiated by one of the database
9 applications with a database management system of a database and generate from data identified
10 in the database transaction an electronic record that requires an electronic signature;

11 receiving, at the processor of the computer system, information provided by the
12 user via the graphical user interface that maps data from underlying database tables associated
13 with execution of one or more operations to be performed by a database application in response
14 to the occurrence of the event to an electronic record;

15 receiving, at a processor of a computer system, information defining indicative of
16 occurrence of one or more events associated with an industrial process, each event in the one or
17 more events indicative of a set of one or more operations to be performed by a database
18 application to accomplish a task in the industrial process;

19 storing data in the database in a plurality of different database tables using the
20 processor of the computer system in response to execution of one or more operations associated
21 with the one or more events, the data related to the execution of the one or more operations;

22 generating, using the processor of the computer system, an electronic record in
23 response to an occurrence of a predetermined event in the one or more events from at least a
24 portion of the data stored in the plurality of different database tables;

25 storing, using the processor of the computer system, an instance of the electronic
26 record as a well-formed XML document that tracks the predetermined event in a common
27 repository of electronic records that provides an audit trail that cannot be altered or disabled by
28 users associated with the database;

29 executing, using the processor of the computer system, a rule associated with the
30 electronic record to determine whether an electronic signature is required to connote review
31 and/or approval of the electronic record; and

32 if execution of the rule results in a determination that an electronic signature is
33 required, marking the instance of the electronic record as unsigned;

34 requesting, using the processor of the computer system, an electronic signature for
35 the electronic record;

36 after obtaining the electronic signature, verifying its authenticity using the
37 processor of the computer system; and

38 if the electronic signature is verified as authentic, marking the electronic record as
39 signed using the processor of the computer system prior to committing the database transaction
40 to the database.